Financing Needs for a Global Mercury Treaty

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Introduction

- Jack Weinberg, IPEN Senior Policy Advisor
- IPEN
  - Global network
  - More than 700 public interest organizations in 116 countries
  - Working collectively to eliminate toxic substances that threaten human health and the environment

Mercury Treaty Update

- Governments started negotiating a global mercury control treaty in 2010
- The fourth intergovernmental negotiation meeting will take place later this month in Uruguay
- The expectation is that negotiations will be completed in 2013 and be adopted and open for signatures at a diplomatic conference to be held in 2013 in Japan
- The new treaty will almost certainly include a financial mechanism although there is not yet agreement on the role of the GEF will play in the financial mechanism

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Financing Needs for Prospective Mercury Treaty

This presentation will cover:

- Considerations that motivate and justify establishing a global mercury control treaty
- Sources of mercury pollution that the treaty will need to control
- Considerations regarding the economic and social costs associated with controlling some of the most important global sources of mercury pollution
- Convention financial mechanism

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Considerations that Motivate & Justify a Global, Legally-Binding Mercury Treaty

- When mercury is released into the environment, it transports globally on wind and water currents and can contaminate ecosystems thousands of miles distant from the point of release

- Most mercury pollution ends up in marine and inland water systems where it can be converted by micro-organisms into methyl mercury, which is highly toxic

- Methyl mercury accumulates in fish, and in the birds, mammals and people who eat fish; older, larger predatory fish tend to have the highest mercury concentrations

Considerations that Motivate & Justify a Global, Legally-Binding Mercury Treaty

- The effects of mercury contamination on wildlife can include death, reduced fertility, slower growth; abnormal development; and changed behavior patterns that affect survival

- Fish everywhere in the world are polluted with mercury

- The highest concentrations of mercury in fish are often found in the Arctic Region and downwind or downstream from: coal-fired power plants, cement kilns, pulp & paper mills, chlor-alkali plants; mines, smelters, dump sites and other industrial sources

Considerations that Motivate & Justify a Global, Legally-Binding Mercury Treaty

- When people eat mercury-contaminated fish, much of the mercury remains in their body and accumulates; this can harm the human nervous system and can increase the risk of high blood pressure and heart attack;

- Pregnant women pass mercury accumulated in their bodies to their fetuses which are particularly sensitive to mercury; after birth, the exposed infant may exhibit reduced intelligence, abnormal muscle tone; and losses in motor function, attention, and performance on standardized tests;

- Nearly 3 billion people in the world today get 15% or more of their protein intake from eating fish;

Considerations that Motivate & Justify a Global, Legally-Binding Mercury Treaty

- Some indigenous peoples and residents of many Small Island Developing States and some African and Asian countries depend on fish consumption for as much as 50% or more of their protein

- Many of the world's poor have no good nutritious alternative to eating fish, and therefore no good alternative to the negative health effects of mercury ingestions on themselves and on their children

Intentional Sources of Mercury Pollution

Any activity in which mercury is produced and/or used for some purpose is called an **“intentional source”** of mercury pollution.

All intentional sources release mercury into the environment during their life cycle of production, use and disposal.

- Mining mercury ore and converting mercury ore into metallic mercury
- Medical equipment such as fever thermometers, blood pressure measuring devices and others
- Switches, batteries, lamps and measuring devices
- Dental fillings
- Small-scale gold mining
- Chlor-alkali plants (plants that produce chlorine gas and sodium hydroxide)
- Mercury salts used as catalysts in chemical plants that produce PVC plastic and that use coal as a feedstock.

Unintentional Sources of Mercury Pollution

Mercury is naturally present at various concentrations in many ores and in coal and other fossil fuels. Burning or processing fossil fuels or ores that contain mercury releases mercury to the environment. These are called **“unintentional sources”** of mercury pollution.

Some unintentional sources of mercury pollution are:

- Coal-fired power plants
- Cement production
- Metals mining and refining

Mercury Wastes and Contaminated Sites

- The mercury treaty will likely mandate a phase-out of the manufacture and sale of many products and articles that contain mercury. However, production and use of some will continue into the indefinite future such as, for example, **fluorescent tubes** and **compact fluorescent bulbs**. Measures and procedures will be needed in all countries to properly collect mercury-containing articles at the end of their useful life, capture their mercury content, and recycle it.

- In most countries, there are multiple locations where soils and/or waterways are highly contaminated with mercury. These include present and former mining sites, some kinds of industrial facilities, waste dump sites and others. These sites pose severe health hazards to surrounding communities and are also a source of global mercury pollution. Remediating such sites can be very costly.

- Existing stocks of mercury cannot be destroyed. As uses of mercury are phased out and minimized under the treaty, countries in each region will need access to facilities that accept mercury and mercury wastes to be permanently stored or sequestered in an environmentally sound manner. Building and operating such facilities will be costly.

Mercury Treaty Financial Needs

There will be many costs associated with implementing meaningful measures to minimize global mercury pollution.

Two examples of extremely important global mercury sources that will be very costly to control are:

- **Coal-Fired Power Plants; and**

- **Artisanal and Small-Scale Gold Mining**

Mercury Treaty Financial Needs: Power Plants

Burning coal is the largest single mercury pollution source. According to a UNEP assessment of mercury pollution from human sources:

25% of global mercury pollution comes from coal-fired power plants

- Any meaningful mercury control treaty will need a financial mechanism with adequate resources to halt and reverse the current global trend of rapidly increasing mercury pollution from power plants as unprecedented numbers of new plants go online every year.

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Mercury Treaty Financial Needs: Power Plants

- As climate change experts understand well, the economic and social costs associated with controlling coal-fired electric power plants are high – especially for developing countries facing power shortages due to the rapid expansion of their economies.
- Nonetheless, a financial mechanism that can realistically support substitute electric power generating technologies to replace fossil fuel fired electric power plants could make major contributions toward addressing both climate change and mercury pollution.
- Other ways to reduce mercury pollution from power plants might include investments in: energy conservation; improved power plant fuel efficiency; removing mercury from coal prior to combustion; and improved plant pollution control devices.

Mercury Treaty Financial Needs: Small-Scale Gold Mining

The other very large global source of mercury pollution is artisanal and small-scale gold mining.

- Artisanal gold miners work as individuals or in small groups, often in remote locations. They gather gold-containing ores, soils and/or sediments and mix them with pure mercury. The mercury and gold combine to form an amalgam which is then easily separated from the ore. The miners heat the amalgam with fire to drive off the mercury into the air; pure gold remains behind. The local health hazards and environmental damage produced are enormous. Between 650 and 1,000 metric tons of mercury are consumed by small scale miners each year, and much of it then enters and circulates in the global environment.

Mercury Treaty Financial Needs: Small-Scale Gold Mining

- Between 10 and 15 million people worldwide are directly engaged in small-scale gold mining activities; another 85 to 90 million people are indirectly dependent on them. They produce between 20% and 30% of all the gold mined each year. With the record high price of gold, more small miners enter the field each day.

- Small-scale miners are mostly very poor, marginalized people. Effective programs to promote alternative mining techniques and/or to provide alternative livelihoods will be costly. Cleaning up the local pollution caused by small scale mining will also be costly

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Thank You!